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- Shipping, Ports and Environment

Port/Route Selection Decision for West African Landlocked Countries: A Case Study of Niger Republic

Abdulrahman Bawuro Barkindo

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DECLARATION

I hereby declare that this research work is original and has been carried out by me to the best of my knowledge and has not been submitted to any other institute of learning. And where the work of others is sited, the appropriate credit is given to the source

ABDULRAHMAN BAWURO BARKINDO

DEDICATION

This work is dedicated to the loving memory of my late wife Mrs Maryam Wali Barkindo, she is still the air that i breathe

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ABSTRACT

Title of Dissertation:

Port/Route Selection Decision for West African Landlocked Countries: A Case Study of Niger Republic

This paper aims at investigating the feasibility of making the "Port Cotonou" route more attractive to customers wishing to import/export goods to/from the landlocked country of Niger. The selection decision in this study is viewed as a factor impacting on port competition in the region.

A look is taken into the maritime transport in the region and its implications, and the influence of shippers in their choice of route was evaluated, the quality of service offered was analysed and ways of improving the efficiency of ports were assessed. And the method used for analysis was the descriptive method.

The findings reveal that maritime demand in the region is increasing gradually. And shippers' from landlocked countries have challenges as regards to corridor distance. However, the results from the study show that distance is not self explanatory factor to either individual ports market share or shippers' port selection decision. The quality of roads and transport are the most important factors affecting market share of ports in the region. Shippers are most interested in the minimisation of their total transit cost. Depending on their interest, they choose a port which allows offsetting of gain from the corridor transport quality and the additional port cost vice versa.

The concluding chapter reviews the findings and suggest a number of recommendations related to Cotonou ports and the promotion of trade in the West African region.

TABLE OF CONTENTS

LIST OF TABLES

Chapter One: Introduction

1.0 Background

The world has become a global village (Mcluhan 1962); this statement is sustained by the logic of trade according to which the incidence of the specialisation and the differences in the circumstances of production are the key driving forces for trade. These differences have led to the terms "Comparative advantage" and Absolute advantage". Regardless of the term used, companies go where the advantages lie. Therefore, trade creates a demand for maritime transport, which consists of moving goods from one point to another. The port industry in addition to shipping industry is one of the key players in this transportation procedure. Ports have undergone great technological and managerial changes due to the event of containerisation as well as deregulation and liberalisation of this sector.

Privatisation and liberalisation has undeniably affected the management of ports where increasing importance is being given to the marketing activities, because there has been an essential need to adjust to the changes. One of those is the purported inter-port competition. Ports have lost the monopoly over their local hinterland and have to struggle to get customers and especially to sustain their development. Customers might be from the immediate or non-immediate hinterland, national or from neighbouring countries or countries located in the same geographical area. Hence, landlocked countries are systematically of great interest for ports, since they have a natural disadvantage as regards maritime transportation when compared to coastal countries.

In West Africa, there is a multiple of small ports in the eleven (11) coastal States of Benin, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone and Togo, each one has at least one port. Thus, landlocked countries in the region consist of Burkina-Faso, Mali and Niger; they have multiple alternatives to choose from for the transit of their import and export. This situation denotes the fierceness of the competition over this captive market. Ports are, therefore, urged to improve their services in order to increase their demand since landlocked countries shippers are influenced by the different factors when selecting a port.

1.1 Research Rationale:

The case is well observed in West Africa, that landlocked countries are estimated to pay a higher price for their participation in trade with overseas countries. They are located in a geographical area where the existing ports are engaged in fierce competition. They have alternatives to choose from for their maritime ports demand. Therefore, they should be capitalising on this opportunity to gain more benefit from inter-port competition in their region, yet, they are still facing challenges as regards the transit of their goods through coastal countries corridors. It is a fact that shippers from landlocked countries incur additional costs (delay, bribes and others) between ports and their location due to poor transportation network in the region. Inter-port competition in the region is, therefore, impacted by the rail and road transport quality, which are the main means of transport.

This study intends reviewing the maritime transport in a prior exploration of the concept of "route" and the role of quality service of the port. The review of feasibility of routes to/ from Niamey to Cotonou, Lome and Lagos will help in better understanding the role of route in the decision of port selection of shipper's from Niamey.

1.2Aims and Objectives:

The research aim is;

- To investigate the feasibility of making the "Port Cotonou" route more attractive to customers wishing to import/export goods to/from the landlocked country of Niger.

Objectives:

- To evaluate the factors that influence shippers in their choice of route.
- To analyse the quality of the services offered by Port Cotonou to potential shippers.
- To assess ways of improving the efficiency of the Port Cotonou route.

1.3 Research questions:

Questions directed towards shippers meet in Niger:

- What is your port of preference?
- Why do you prefer this route?
- Do you use a combination of existing railways and road?
- What are the shortcomings of this route?
- What are the advantages of this route?

Questions directed towards shippers meet at port Cotonou:

- What do you consider the advantages of Cotonou port as an importer/exporter compared to other ports in the region?
- What do you consider its shortcomings compared to other ports in the region?
- How do you score the ports compared to others in the region?
- What is your preferred mode of transport to/from the port (rail or road)?
- What do you consider the best service offered by the port?
- What do you consider a weak service offered by the port?
- What are you suggestions for improvement of the services provided?

Questions directed towards port officials:

- What do you consider to be the major strength of port Cotonou (with respect to imports/exports to/from Niger)?
- Is there any truth in the recent newspaper article that Cotonou is currently losing Niamey business to the Lagos port? If so, what do you consider to be the reason(s) for this?
- What measures are currently being considered to address this threat and the completion posed by Lagos and Lome ports?
- Are there currently any issues affecting port efficiency e.g. logistic bottlenecks, labour issues, port rats, bureaucracy etc?
- What measures (if any) are currently being considered by the port Authority to address these issues?
- Will the measures considered require additional funding?
- If so, how will the necessary funds be raised in the present financial climate?

1.4 Scope of the Study:

This study is to find out port selection decision for the Land-Locked West African State of Niger. The study covered only Niamey the capital city of Niger Republic, Cotonou port of Benin Republic and Apapa port of Nigeria. To do this effectively, primary information will be gathered from the capital of Niger Republic Niamey not the entire country, port of Cotonou and Apapa port of Lagos Nigeria not considering the other nine (9) ports in the country. And this gathered information or data is what is going to be used for the analysis in chapter four

1.5 Methodological Approach:

A significant part of the study is the methodology, which entails collection of primary and secondary data and the analysis of the primary data. Methodology is the fundamental part for any project, what path they use to perform best and to accomplish set goals. Methodology is fundamentally the map, structure and systematic way towards maximum result. This study's methodology will be discussed in the chapter three of this dissertation, and it defines the way how data will be collected, what is the research philosophy, strategy, approach and research theory will be implemented (Saunders et al 2007).

Furthermore, to conduct the case study of Niger, will give a comprehensive understanding of feasibility of making the "Port Cotonou" route more attractive to customers wishing to import/export goods to/from the landlocked countries of West Africa in general.

1.6 Conclusion:

In this chapter the study has introduced the research topic and has shown the aims and objectives of the research. The problem that prompted the research; and significance of the study as well. It is also in this chapter that the research questions and the methodological approach where mentioned and research hypotheses postulated.

The next chapter is going to be the literature review on the maritime industry in West Africa. It is in the next chapter that the study will give a clear literature of shipping and ports activities in the West African region, for a clearer understanding to any

reader. It is after this chapter that every reader will understand the theoretical framework of the maritime industry in West Africa for a clearer picture of how shippers select their port of choice, most especially concerning landlocked States like Niger Republic.

Chapter Two: Literature Review

2.0 Introduction:

Stopford (1997) said the Seaborne trade is one of the great econornic successes of the last 50 years. From 1950 to 1995 it grew from 0.55bt to 4.3bt, making shipping one of the fastest growing sectors of the post-war economy. With the tremendous improvements in transport technology, communications and continuous decrease in transport cost, world trade especially during the last couple of decades, has grown far more rapidly than the world GDP (Ma 2007). Ma went on to say "about 90% of the world trade of goods measured in tons is moved by sea". The major source of competitiveness of the maritime transport comes from low cost and possibility of achieving economies of scale (Ma 2007). Specialization in the maritime sector also played an important role in reducing the cost of transport. By the 1960's Stopford said "the traditional system of 'break bulk' liner shipping became increasingly unable to cope with the escalating volume of world trade. To overcome this, palletization and containerization were introduced to speed up the flow of cargo". This unitization of the liner shipping business he called the most important 'technical development'.

Maritime transport is a driven demand and it is well acknowledge that the developments in the world economy and trade have a direct effect on the maritime demand (Ma 2007). Moreover, there is a clear link between trade development and the world economic health. The former grows generally more quickly than the latter. This fact is illustrated in West Africa as well.

A clear relationship exists between maritime traffic and global economy, making it a supply driven demand. By and large, the trend related to the trade of merchandise and the demand of maritime transport in West Africa is similar to the trend in Africa in general.

2.1 Factors influencing port competition:

Globalisation of the world economy has brought about some changes which could be referred to as source of competition. These changes, according to (Winkelmans 2003) range from a company's organisation, education, training and institutional frameworks to the environment. This is verified, since there was a need for public and private entities to face the changes in trade, adjust to technological changes,

which in turn will enable their full autonomy and responsibility, as well as sustainable development. This scenario has not yet stopped, as changes are known to trigger even more changes proving then the reinforcement of competition in the future.

The changes in trade referred to by the previous mentioned author have been identified by (Nottenboom 2004) in his article "Container shipping and ports: An overview". They are mostly concerned with the globalisation phenomenon coupled with the booming of the world's container transport. And (Nottenboom 2004) similar to (Winkelmans 2003), acknowledges the need for public and private entities to redefine their organisational framework in order to cope with the new environment. In addition, the studies points out the immense role played by microeconomic, macroeconomic and policy oriented factors including, trade facilitation factors through the elimination of trade barriers and the privatisation and deregulation of markets and on the other hand the benefit of economy of scale thanks to the increase in vessel size.

Other identified factors are the changes in ports and shipping markets, including the concentration in shipping and ports due to horizontal and vertical integrations, and also the integration of shipping services to the supply.

Regardless of the type of changes, they all have brought about the so called "level playing field" and are in the meantime the consequence of the same "level playing field" (Winkelmans 2003). Port competition is a fact and now cannot be reversible. And a good understanding of the concept itself, and the environment it affects, will help the different stakeholders to adjust and, consequently, to achieve their commercial goals.

2.2 Determinants of Shippers Port Choice:

Today, consumers have become demanding than ever before. Consequently, shippers' behaviour in port selection has evolved over the years. Depending on the size of their businesses, shippers could choose either to have long term contracts with shipping lines, use freight forwarders or simply behave as independent shippers (Tongzon, 2002).

What matters most to consumers is the increase in their turnover and the minimisation of their inventory cost (Haralambides, 2002). Since ports are an

important mode of the logistic chain, it is therefore important for them to help in minimising the shippers' cost. In this regard, many factors have been identified as shippers' port choice determinants, including qualitative factors as well as quantitative factors. The quantitative are obviously those that can be measurable and could be categorised in three groups namely, the route factors, cost factors and service factors (D'Este & Meyrick, 1992). While, qualitative factors bear a high level of subjectivity and could refer to the flexibility and ease of use, a port's marketing efforts, tradition, personal contacts and the level of co-operation between the shipper and the port (Tongzon 2002).

Regardless of the nature of influential factors, Tongzon (2002) through a survey has identified seven shippers' port choice determinant factors. They include high port efficiency, shipping frequency, adequate infrastructure, good location, low port charges, quick response to port users' needs and good reputation for cargo handling. However, it is interesting to note that the most important factor is port efficiency (Tongzon 2002). These findings have also been confirmed by (Ugboma 2006) based on empirical experiences (Survey) with shippers using Nigerian ports after port efficiency has increased.

2.3 Determinants of carries' port selection decisions:

The understanding of carriers' port selection behaviour is crucial for the formulation of port management policies.

Carriers, as private entities, when calling ports aim at the maximisation of profit with a full knowledge of the importance of the necessity to satisfy their customers (shippers). Hence, there are a number of determinants for shipping lines' or carriers' port selection behaviour. And similar to those explaining a shippers' port selection, those factors can either be quantified or not.

Numerous researchers have identified those factors in a global perspective. (Lirn et al 2004) grouped them in four comprehensive categories including the port physical and technical infrastructure (basic infrastructure condition, technical infrastructure and inter-modal links), port geographical location (proximity to import and export areas, proximity to feeder ports and proximity to main navigation routes), port management and administration (management and administration efficiency, vessel

turn-around time and port security/safety and finally carriers' terminal cost, handling cost of containers, storage cost of containers and terminal ownership/exclusive contracts policy).

(Tiwari et al 2003) simply states in their article that "Shippers port and carrier selection behaviour in China: A discrete choice analysis" that all the above identified factors are both service and cost related.

2.4 Regional, legal and institutional framework:

There are two main regional bodies in West Africa namely "West African Economic and Monetary Union" (WAEMU) and the "Economic Community of West African States" (ECOWAS). WAEMU is made up of former French colonies in West Africa and is composed of Benin, Burkina-Faso, Cote d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. Its mission is to enhance the competitiveness of the economic activities of its members on "a level playing field" market basis (WAEMU 2008).

ECOWAS on the other hand is made up of Cape Verde, Gambia, Guinea, Ghana, Liberia, Nigeria and Sierra Leone as well as all the cited members of WAEMU. Its mission is "to promote economic integration in all fields of economic activity, particularly industry, transport, telecommunication, energy, agriculture, natural resources, commerce, monetary and financial questions, social and cultural matters..." (ECOWAS 2008).

These two regional institutions all aim at promoting economic integration and international trade but, the major difference between then lie on their language and currencies. It could be argued that the likelihood for landlocked shippers to pass through a French colony with which the country shares the same language and currency could be greater than passing through another country. Hence, the market of Ghana and Nigeria might be influenced by the language, currency factor or simply the regional institutional framework.

The international community conscious of the geographical disadvantages of landlocked countries, has adopted some relations in order to help these countries to have access to seaports when transiting their goods through coastal countries located in their neighbourhood. These legal instruments include the Convention and Statute on Freedom of Transit 1921; the General Agreement on Tariffs and Trade

(GATT) 1947, which is now part of the GATT 1994; the Convention on Transit Trade of Landlocked States 1965; and the United Nations Convention on the Law of the Sea 1982. Moreover, the Almaty Program Action was adopted to complete the lists. This program has the objective of reinforcing co-operation between landlocked countries and transit corridors.

These instruments have been ratified by some members of Economic West African States (ECOWAS), but not by all. Even member countries concerned with the transit trade have failed to adhere to these instruments (N'Guessan 2003). However, at the regional level the conventions governing the transport and transit facilitation (TIE and TIR convention as well as ECOWAS "Carte Brune") are suffering from lack of proper implementation. As a matter of fact, a study conducted West African Economic Monetary Union (WAEMU) in1998 related to TIE and TIR Conventions revealed that 70% of the rules covering transit and transport in the union are based on bilateral agreements or national regulations rather than on the multilateral conventions (N'Guessan 2003).

The institutional framework consist of government bodies, customs authorities, port authorities, maritime regulatory agencies, maritime labour unions, shippers' councils, clearing and forwarding agents, road and rail haulage companies, insurance companies and the banking industry.

Delays and various illegal fees collected from drivers and truckers are mainly due to the customs procedures and documentations, which can be described as cumbersome and improper organisation of haulage companies as well as the freight forwarder professions. Customs procedures are cumbersome due to the fact that there is no procedure for harmonisation between the different countries in the region.

2.5 Maritime economic review of West African States:

The maritime in West Africa is characterised by imbalances value of imports and exports, imbalance in goods loaded and unloaded and imbalance in container traffic. The imbalance between imports and exports explains the level of containerisation in Africa, and in particularly West Africa.

The trade imbalance existing in the region is worth noting, the import in value is almost double the export of merchandise (WTO 2007 See Tables 1 & 2). Even

though the trade imbalance in value does not show the imbalance between the goods carried to and from West African ports. Another imbalance worth noting is, among studied West African countries, only Cote d'Ivoire has recorded a positive balance between imports and exports.

Table 1: West African imports of merchandises: 2000-2006

	Import of Merchandise (Million Dollars)						
year	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Benin	613	623	725	892	894	894	990
Burkina-Faso	611	656	739	925	1270	1280	1450
Cote d'Ivoire	2785	2418	2456	3231	4291	5350	5310
Ghana	2973	3154	2720	3210	4074	5755	5497
Mali	806	990	928	1271	1364	1266	1860
Niger	395	412	468	622	750	805	950
Nigeria	8721	11586	7547	10853	14164	20754	21809
Senegal	1591	1730	1958	2391	2849	3197	3434
Togo	562	553	591	775	880	1000	1100
Total SWAC'S	**19057**	**22122**	**18132**	**24170**	**30536**	**40301**	**42400**
Annual Average change (%) 2000-2004					0.11		

Source: WTO International Trade Statistics 2007, Appendix Table A6, A7

Table 2: West African exports of merchandises: 2000-2006

	Export of Merchandise (Million Dollars)						
year	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Benin	392	374	448	541	568	569	560
Burkina-Faso	209	223	247	321	479	347	440
Cote d'Ivoire	3888	3946	5275	5788	6919	7488	8420
Ghana	1671	1716	1850	2324	2450	2803	3703
Mali	454	725	874	928	977	1135	1350
Niger	283	272	279	352	437	500	540
Nigeria	20975	17261	15107	22605	31148	42277	52000
Senegal	920	1003	1067	1257	1509	1536	1550
Togo	363	357	427	598	601	586	617
Total SWAC'S	29155	**25877**	**25574**	**34714**	**45088**	**57241**	**69180**
Annual Average change (%) 2000-2004					0.14		

Source: WTO International Trade Statistics 2007, Appendix Table A6, A7

There are discrepancies in terms of goods loaded and unloaded goods unloaded are far lower than the goods loaded of which they represent a portion equal to less than one quarter (Maritime Transport Review 2006). The goods unloaded are usually containerised cargo while those loaded are mainly bulk cargo. This imbalance is explained by the fact that the export cargo is to a large extent made up of both wet and dry bulk cargo. There is a large amount of wet bulk crude oil loaded from exporting countries of West Africa (Nigeria, Gabon, Angola and Equatorial Guinea), and that of dry bulk bauxite and iron ore.

African ports have experienced increases in the container throughput and the growth between 2003 and 2004, this increase was 16.33% compared to 12.6% for the world. But they are still lagging behind as regard to the share of their container throughput as compared to the rest of the world, even though there is a significant increase in the container throughput, their contribution to the world total is still small, the figure was estimated to be 3.3% of the world total in 2005 (UNCTAD 2006).

African ports are experiencing increases in the container throughput and the growth in this part of the world is even faster than the growth in the whole world. Between 2003 and 2004 the change was 16.33% for the African region whereas it was 12.6% for the rest of the world (UNCTAD 2005).

Table 3: Merchandise trade of Africa: 2000-2004

	Billion of $		%Annual Growth		World Share in % for	
Year	Export	Import	Exports	Imports	Exports	Imports
2000	148.50	129.10	27.40	0.80	2.40	2.00
2001	137.90	134.00	-7.10	3.80	2.40	2.20
2002	140.10	136.60	1.60	1.90	2.20	2.20
2003	175.10	162.80	25.00	19.20	2.40	2.20
2004	231.70	204.80	32.30	25.80	2.60	2.30
Average	166.66	153.46	15.84	10.30	N/A	N/A

Source: UNCTAD secretariat, Maritime Review of Transport 2006, Table 48, page 102

Over the period 2000-2004 the African region has known an average annual increase in both imports and export trade value of the value of 15.84% and 10.30% respectively (UNCTAD 2006 See Table 3). During the same period, the Studied West African Countries have recorded some positive change in both the imports and export as well of 11% and 14% respectively (WTO 2007 See Table 1 & 2).

Table 4: Origin of African Imports: 2004-2006

		Market Origin of Import to Africa					
Value	Period	World	Europe	North America	U.S	South & Central America	*CIS
billions of dollars	2004	229.91	92.32	44.81	6.98	39.67	0.69
	2005	299.54	115.79	64.60	9.18	57.40	0.97
	2006	363.29	131.56	79.80	11.33	71.12	1.45
	2004-2006	297.58	113.22	63.07	9.16	56.06	1.04
Percentage	2004	100.00	40.15	19.49	3.04	17.25	0.30
	2005	100.00	50.36	28.10	3.99	24.97	0.42
	2006	100.00	57.22	34.71	4.93	30.93	0.63
	2004-2006	100.00	49.25	27.43	3.99	24.38	0.45

Source: WTO International Trade Statistics 2007, Appendix Tables A2 and A6

Table 5: Destination of African exports

		Market Origin of Import to Africa					
Value	Period	World	Europe	North America	U.S	South & Central America	*CIS
billions of dollars	2004	46.65	20.07	3.48	3.18	1.15	0.02
	2005	56.39	23.19	4.36	3.89	2.09	0.05
	2006	68.12	25.63	5.21	4.47	2.77	0.04
	2004-2006	57.05	22.96	4.35	3.85	2.00	0.04
Percentage	2004	100.00	43.02	7.46	6.82	2.47	0.04
	2005	100.00	41.12	7.73	6.90	3.71	0.09
	2006	100.00	37.62	7.65	4.47	4.07	0.06
	2004-2006	100.00	40.59	7.61	6.06	3.41	0.06

Source: WTO International Trade Statistics 2007, Appendix Tables A2 and A6

Africa has trade relationships with different countries or groups of countries including Europe, North America, the United States, South and Central America and the Commonwealth of Independent States. However import origin and export destination shows a stronger trade partnership with European countries (WTO 2007 see Table 4

& 5). Over the period 2004-2006, the import and export to and from Europe accounted for 49.25% and 40.59% respectively (UNCTAD 2006 See Table 6).

Table 6: Container traffic between the W. A. and Europe (In thousands of TEUs): 2000-2005

	Real		Forecasted	
Year	Southbound flow	Northbound flow	Southbound flow	Northbound flow
2000	465	253	465	253
2001	447	267	447	267
2002	Nil	Nil	440	267
2003	534	278	437	270
2004	532	281	439	273
2005	556	286	446	277

Source: Derived from UNCTAD secretariat, Maritime Review of Maritime Transport 2003, Page 114, table 56 and adapted from Maritime Review of Transport 2006, Table 54 page 114.

2.6 Ports infrastructure and equipments in the region:

Conventionally, only geared vessels call at West African ports because these port do not have the appropriate equipment to efficiently handle the vessels. However, with the advent of the concession of terminals big efforts have been and continued to be made to equip these ports with appropriate facilities that will contribute to the improvement of port efficiency.

Code d'Ivoire was the first in the region to acquire gantry cranes in 1986 (Louko 2008), followed by port Tema of Ghana (Gbeyi-Donko 2007). These acquisitions were made to accommodate gearless vessels. The award of the concession of the Apapa port of Lagos by AP Moller-Maersk Group in 2005 and the "Terminal du Future" of Dakar by Dubai Ports World in 2007, there has been great improvements of these terminals and increase amount of port equipments, both ports will be able to accomrnodate third generation ships (Badji 2008). Lome ports also purchased two mobile cranes in 2006 and Cotonou in ports in also acquired two mobile cranes in 2007 (Ganssou 2007).

As has been mentioned earlier, carriers are interested in short transit time low ports cost. Therefore, adequate facilities have to be put in place to satisfy these conditions. However, ports in Africa, and especially those of West Africa, seem not to

respond adequately to these challenges. Some of the quantifiable infrastructure and superstructures are summarised in table 7.

Table 7: (Some West African Port Facilities: situation in 2008)

Ports	Bassin (ha)	Draft (m)	Berths (nb)	Port quay length (m)	CT quay length (m)	Cov&open area (sm)	Container yard (sm)	Gantry cranes (nb)	Mobile cranes (nb)
Abidjan Cote d'Ivoire	1000	15	40	2920	960	55800	320000	3	0
Apapa Nigeria	NA	9	6	4059	1005	NA	446400	4	0
Banjul Gambia	NA	8	4	750	200	49938	23338	0	0
Cotonou Benin	60	10	12	1200	420	270000	170000	0	2
Dakar Senegal	87	11	40	4060	484	232097	360000	0	3
Lome Togo	81	14	8	1077	390	136000	125000	0	2
Tema Ghana	166	11.5	12	2013	575	390000	255000	3	0

Source: Compiled by the researcher from different sources

Based on the facilities they offer (See table 7) it appears clearly that west African ports are not able to accommodate larger vessels and hence are unable to offer the benefit of economies of scale to shipping lines.

Although there has been an increase in the number of vessel calls in this part of the world (15,000 in the early 1990s' to more than 20,000 in the early 2000s'), the size of the vessels is not increasing. The size of vessel calling at these ports is not above 2500 TEUs and mostly ranges between 1000 and 2000 TEUs. This has indeed an impact on the number of shipping lines serving the region compared to other regions.

Substantial port equipment acquisition and infrastructure extension in West African ports have taken place in the era of privatisation and commercialisation which has been undergoing since the early years of the 21st century.

2.7 Major terminal operators in the region:

West African ports have introduced port reform in line with Anglophone and Francophone models paving way to Private Public Partnerships (UNCTAD 2003).

Until 2000 most of West African ports were still under the control of the government that used to be fully in charge of the handling activities. Private operators in African ports are represented by 16.1% while State operators are 83.9%, compared to the world where State operators are represented by 20.9% and private operators by 79.1% (Drewry 2005).

Private terminal operation in West Africa started in the early 21st century. And the set is Private-Public Partnership regardless of whether it is a general cargo or container terminal. The major terminal operators in the region are Maersk, Bollore and CMA-CGM, but Dubai Ports World and Progosa have also succeeded in penetrating the West African terminal operation market.

Nigeria's Apapa port is managed by Maersk, the container terminal covers 44 hectares and can handle up to 22 thousand TEUs of containerized cargo, it has six berths with a depth of 10.5 meters, a total quay length of 950 meters, it also contains 6.4 thousand square meters of covered storage, the yard has capacity for 19.5 thousand TEUs, and it contains 298 reefer plugs (http://www.worldportsource.com/ports/NGA_Port_of_Apapa_1725.php).

Whereas, in Cotonou Maersk and Bollore are competing in the same terminal, Cotonou is Benin's capital, economic hub, and principal metropolitan centre, a World Trade Indicators report recognized the port as 2007's third leading exporter in the region, largely due to growing re-exports to Nigeria and a free zone for Mali, Niger, and Burkina Faso, the port covers 400 thousand square meters, and its commercial quay contains four 155-meter berths, two 180-meter berths, one 220-meter berth for container vessels, and one berth for roll-on/roll-off cargoes, OTAL has a terminal dedicated to handling containerized cargo, it contains 7 thousand square meters of container space and container-handling equipment. (http://www.worldportsource.com/ports/BEN_Port_of_Cotonou_1597.php)

While the container terminal in Ghana's Tema port is operated by a consortium called Meridian Port Services (MPS) consisting of Ghana Ports and Harbour Authority (GPHA), Maersk and Bollore (Gbeyi-Donko 2007). The one in Abidjan is handled by "Societe d'Exploitation du Terminal de Vridi" (SETV) made up of a Bollore (60%) and Maersk (40%), however in Lome the terminal is managed by

"Soceite d' Entreprises de Manutention Maritime" (SE2M) consisting of a partnership between Progosa and CMA-CGM (PMAWCA 2005). And Dakar port is managed by Dubai World Ports (DWP).

Besides the terminal operators, another type of stakeholder is the carrier or shipping line. Manifestly, they are ensuring the connection between the region and the other parts of the world and they play a role in the development of trade in the region.

2.8 Port accessibility in West Africa:

As a result of lack of traffic volumes, poor efficiency and inappropriate or insufficient infrastructures, few shipping lines call at West African ports as compared to other regions (Palsson et al 2007).

The Liner Shipping Connectivity Index (LSCI) developed by UNCTAD in 2004 and upgraded in 2006 gives an overall picture of the container traffic in the world. LSCI also gives an idea of how regular and frequent shipping activities are. Owing to the positive impact of this regularity and frequency for economic activity in the country, the LSCI is considered to be an important tool for measuring how competitive nations are. According to UNCTAD Secretariat, LSCI quantifies competitiveness. It is built up by taking nine elements into consideration (UNCTAD 2006). These elements include the number of containerships, container carrying capacity deployed, the per capita number of containerships, the per capita container carrying capacity, the number of liner shipping companies servicing a country's ports, maximum size of vessels deployed, the average size of vessels deployed and the average number of vessels operated per liner shipping company.

Table 8 gives a ranking of West African ports as to their likelihood to be preferred by shipping lines, if we assume the frequency and regularity of shipping services in a country as the preference of shipping lines for a particular country.

Table 8: W A countries' connectivity to shipping Liner Shipping Based on LSCI: 2004-2006

Rank	Country	2006	2005	2004
59	Ghana	13.80	12.60	12.50
60	Nigeria	13.00	12.80	12.80
61	Cote d'Ivoire	13.00	14.50	14.40
67	Senegal	11.20	10.10	10.10
69	Togo	11.10	10.60	10.20
71	Benin	11.00	13.90	13.90
111	Sierra Leone	5.10	6.50	5.80
114	Guinea - Bissau	5.00	5.20	2.10
116	Gambia	4.80	6.10	4.90
121	Liberia	4.50	6.00	5.30

Source: UNCTAD Transport Newsletter 34 (2006)

Based on the infrastructure, facilities and equipments the West African ports offer, it appears clearly that they are not able to accommodate larger vessels calling, and hence they are unable to offer the benefit of economies of scale to potential shipping lines.

2.9 Shipping line concentration in West Africa:

Related to the eleven main identified trade routes linking West Africa and other regions (See table 9) it can be seen that the number of shipping lines has undergone some changes over the years. The overall picture shows an increase in this number from 89 in 2000 to 92 in 2007, an increase of almost 4%. However, it can be noticed that a clear decrease in the main actors on some trade routes in favour of some others. For instance, the number of shipping lines on the West African-South American route has grown from 4 to 30 whereas there has been a decrease in the number of shipping lines servicing the 9 remaining shipping routes.

As a matter of fact there has been a fall in the number of the main players on the West Africa-European trade route. From 39 in the beginning of 2000, this number has declined by almost 26% to 29%. Even though the maritime transport demand on the trade route West Africa-Far East is still small in comparison to the European one, the number of shipping lines offering regular services on this particular route has changed from 6% to 10% over the same period, an increase of about 67%. This could confirm earlier studies proving that European trade with Africa is declining to the benefit of other group countries, like Asian countries, notably China.

Table 9: Number of shipping lines serving West African ports: 2000-2007

Trade Routes	2000	2001	2002	2003	2004	2005	2006	2007	Change 2000-2007 (%)
West Africa-Australia	1	1	NA	NA	NA	NA	NA	NA	NA
West Africa-Europe	39	37	30	30	37	33	31	29	-25.6
West Africa-Far East	6	8	9	9	10	8	8	10	66.7
West Africa-Indian Ocean	3	2	4	5	4	4	5	2	-33.3
West Africa-Mediterranean	19	24	24	17	14	13	12	12	-36.8
W A-Nth America East Coast	8	5	2	2	2	4	4	5	-37.5
W A-Nth America Gulf Coast	8	6	4	5	5	4	4	3	-62.5
W A-St Lawrence Seaway	1	1	1	1	NA	NA	NA	NA	NA
W A-Nth America West Coast	NA	NA	NA	NA	NA	1	1	1	NA
W A-Sth America East Coast	4	3	2	2	11	14	16	15	275
W A-Sth America West Coast	NA	NA	NA	NA	NA	NA	NA	15	NA
Total number of shipping lines	**89**	**87**	**76**	**71**	**83**	**81**	**81**	**92**	**3.4**

Source: Compiled by the researcher from Containerisation International (various years)

It can also be argued that the number of shipping lines has decreased due to the effect of concentration in the shipping industry. Some of the listed carriers belong to the same owner. Delmas and OT Africa Line (OTAL) belong to Bollore group of France; and Maersk and Safmarine to AP Moller of Denmark (UNCTAD 2003). In reality two important shipping lines serve West Africa, notably Delmas with 55% of the West African traffic and Maersk. To ensure its weekly service to West Africa from a number of European ports, Delmas has vessels ranging from 1500 and 2200 TEUs geared vessels. Maersk provides a feeder service to West Africa from its European transhipment ports, especially Algeciras (UNCTAD 2003).

Nevertheless, it is understandable that West-African countries have a bigger commercial partnership with Europe. In a review of regional developments as regards to Sub-Saharan Africa has given the details of their imports and exports in value as well as destination of exports, it has been noticed that 47% of their export is meant for European Union followed by Asia accounting for a share of 15.2% (UNCTAD 2006).

2.10 Shipping lines response to changes:

Shipping lines have established different strategies to cope with the changing environment in West and Central Africa (Palsson et al 2007). They pointed out the 1974 Code of Conduct for Liner Conferences and the 40-40-20 rule as the factors that contributed to the substantial role of shipping until 1990. Meanwhile, as a consequence of this rule, several shipping companies have come into existence without possessing a single ship and have based their business on selling their country's share of traffic to other outsider companies with no responsibility as to quality and cost of services.

The shipping policy reforms recommended by UNCTAD to ensure competitiveness and competition in the business for the benefit of all the different stakeholders and their consideration by the European Union (EU) and the African, Caribbean and (ACP) states through the Cotonou II agreement have resulted in the end of 40-40-20 rule in many countries. To a great extent this in turn, has led to the decrease in the number and scope of national shipping lines.

Following the withdrawal of national shipping lines, the shipping industry in West Africa, similarly to other parts of the world, is dominated by a handful of companies operating mostly under the umbrella of consortia.

Palsson et al have given credit to Hartmann on his studies on "Shipping Trade Agreement between Europe and West Africa" who pointed out the collapse of the existing conferences[1] in the Europe-West African trade this constringent withdrawal was the consequences of the positive response of the European Commission to the reaction of Maersk. The European West African Trade Agreement (EWATA) was set up by some carriers (almost 50% market share) involved in the previously mentioned trade in 2000 to stabilize rates. Meanwhile, Delmas and OT Africa Line (OTAL) remained outsiders with an eye on the pricing of the newly established conference.

The joining of Delmas and OTAL to EWATA in 2003 led to more concentration of the business since they had control of almost 75% of the said market. Meanwhile, this

[1]The shipping lines conference engaged in the European-West African trade route until the mid-90s include the Continent West Africa Conference (COWA), UK-West African Lines (UKWAL), Central-West African Lines (CEWAL) and Mediterranean-West Africa Conference (MEWAC).

entrance was followed by the P&O Nedlloyd and West-Africa Line respectively in the second semester of 2003 and 2004.

Port competition in West Africa is a real matter more especially over the landlocked countries markets as well as the transhipment market. This has been confirmed by earlier studies.

For instance, (Palsson 1998) through his impressive research on the benefit of a hub and spoke system in West Africa, as compared to a multiple calls system, has given the idea on competition that coastal countries could be engaged in a positioning themselves as transhipment ports. On the other hand, (Vissiennon and Alix 2003) highlighted the importance of West African port service that are offered to shippers and made a synoptic analysis of the competition faced by the port of Cotonou as regards to other ports in the sub-region. (Luguye 2004), in his dissertation entitled "A comparative study of import transit corridors of landlocked countries in West Africa" has pointed out the rudeness of the competition over landlocked countries market as well as the qualitative factors that influence shippers' port choice. In another view, (Alix 2008) viewed port competition in the range Cotonou-Dakar with more emphasis on the evolution of concentration of containerisation together with the changes in terms of cargo handling operations attracting terminal operators in the region.

In response to the challenges of the port competition, ports in the region have specific strategies to cope with the situation.

2.11 Distance from ports to landlocked countries commercial centre:

The table 9 summarised the distance between landlocked countries shippers' centre of activities and selected ports. Based on these figures Lome port is the closest Ouagadougou the capital of Burkina-Faso at a distance of 970 km. As for Bamako the capital of Mali, the port of Abidjan is much closer than any other port to a kilometre distance of 1230. Meanwhile for the case study of this research Niamey the capital of Niger, Cotonou port is the shortest distance at 1056 km, it should be noted that Lagos was not among the ports selected, but regardless Cotonou is still a shorter distance to Niamey than Lagos.

Table 10: Distance between ports and major cities of Landlocked Countries

	Distance to selected port In (Kilometres)				
Selected Cities	**Abidjan**	**Cotonou**	**Dakar**	**Lome**	**Tema**
Ouagadougou	1176	1015	2401	970	1042
Bamako	1184	2036	1431	1873	2012
Niamey	1629	1056	2854	1136	1495

Source: Derived and adapted from Luguye (2004 page 21 & 2007 page 4) and Vissiennon & Alix (2003)

It has been assumed that the traffic demand is mostly generated from the largest cities (capitals). The reason behind this assumption is that even though the second largest cities might be relatively important commercial centres, the weight of its importance is unknown. Similarly the export traffic from Arlit in Niger Republic is not known as well. Therefore an attempt to use the average distance between both capital city and the secondary city could lead to confusion and a misleading interpretation.

But distance alone does not determine the influence of the transit traffic generated by landlocked shippers in ports at 100%. It appears, therefore that there are other explanatory and, furthermore, this confirms the findings of earlier research.

Coulibaly and Fontange 2005 have identified several factors depending on whether the trade is on regional or international basis. To them, on a regional level, the trade can be influenced by a border factor, a distance factor, a transit factor, and an infrastructural factor. The first factor is the number of borders to be crossed by the imported or exported goods. The second factor is the road distance between the two partners involved in the commercial business. The third factor means the road distance from the first border to the last crossed by the shipped goods. The last factor is assimilated to the percentage of paved roads between the two trading partners. However, these factors are reduced to two, including the average sea distance from overseas countries to all the southern coastal countries and the inland distance

Port traffic in West Africa is largely extra-regional seaborne traffic, since to date short sea shipping is not promoted due to reasons including high concentration of ports in the region and the lack of the required facilities. Therefore, the likelihood of

landlocked shippers selecting one or another port in the region will be affected by all the factors as identified by Coulibaly and Fontagne.

2.12 Other influential factors on landlocked port service demand:

Distance is not an isolated influencing factor. It is rather, associated with the transit cost and the total cost to be incurred by shippers for the shipment of their goods from one end to the other. It has been proved that freight cost of imported goods as a percentage of the important value incurred by African countries is the highest in the world see table 11.

Table 11: Freight cost as percentage of import value

	Freight costs as % of import value			
Country group	**1990**	**2000**	**2004**	**2005**
World total	5.3	5.0	5.1	5.9
Developed countries	4.4	4.3	4.7	4.8
Economies in transition	6.6	7.8	5.5	7.6
Developing Countries of which:	8.6	6.6	6.0	7.7
Africa	9.4	9.6	10.3	10.0
America	6.0	5.0	4.4	4.4
Asia	9.2	6.8	5.9	5.9
Oceania	9.5	9.5	10.0	9.6

Source: Derived from UNCTAD secretariat (2007 page 79). Maritime Review of Transport

In an implicit way, maritime distance does not influence transportation cost but rather other variables including connectivity, port efficiency and economies of scale. Even though the maritime distance does not affect the transportation cost much, distance is main determinant of rail and road transport costs.

The transit cost incurred by the landlocked countries has three components according to (Graham 2007). It includes the transportation cost, other logistics cost, and cost of time and delay. The transportation cost is the fee paid by the shipper to truckers or rail operators for the actual transit transportation services whereas other logistics costs are connected to the variety of fees and charges paid for transit procedures, freight forwarder costs, and legal or illegal facilitation payments. However, the costs of time and delay are referred to as costs including cost of inventory in transit, and cost of unreliability.

Rational landlocked shippers will have a preference for corridors through which the transportation cost of their goods will be minirnised. Therefore, the likelihood is to choose ports linked with, not only better road quality, but also roads which has less-delays and less harassment.

2.12.1 Road quality

The World Bank Research Group (2006) has estimated the Road Transport Quality (RTQI) for Sub Saharan Africa based on the countries percentage of paved roads, GDP and the World Bank's Country Policy and Institutional Capacity Index (CPIA), transparency, accountability and corruption shown in table 12. Togo received the highest index score (37), exceeding Senegal by one point, followed by Nigeria (32.3), Ghana (27), Benin (25.1) and Code d'Ivoire (14.4)

Table 12: Road Transport Quality Index and Market Share of studied West African country over a selected landlocked countries market

		Market Share of major ports in selected country over a selected landlocked states' market		
Country	**RTQI**	**Burkina-Faso**	**Mali**	**Niger**
south Africa	**100.00**			
Togo	37.00	38.94	9.20	9.81
Senegal	36.00	0.00	39.90	0.00
Nigeria	32.30	NA	NA	NA
Ghana	27.00	32.92	17.87	9.16
Benin	25.10	8.39	3.70	81.02
Burkina-Faso	21.20	NA	NA	NA
Cote d'Ivoire	14.40	19.74	29.33	0.00
Mali	16.50	NA	NA	NA
Nigeria	11.00	NA	NA	NA
Market		**100.00**	**100.00**	**100.00**

Source: Column 2 derived from Buys et al (2006) page 11

Even though Africa as whole, and West African countries in particular are characterised by poor road quality in comparison to Southern African road connections, some countries have relatively better road quality transport than others. This might attract or deter landlocked shippers from selecting a port.

Road transport quality is not the only matter of the physical quality of road but also other factors that might influence the smooth flow of goods on a particular transit corridor. Those elements have been incorporated in the calculation of the RTQI and

include the harassment of truckers, drivers causing delays and additional costs which are passed to shippers.

As far as the transportation system in the West African region is concerned, landlocked countries shippers have very limited choice. In reality the transport network, including the road and rail systems suffers, from insufficiency.

2.12.2 Road transport network

The network consists of three categories of road which are coastal roads linking coastal countries, corridors linking landlocked countries to the sea, and the trans-Sahel road between Niger and Chad. Coulibaly and Fontagne pointed out that the network is unfairly distributed with a 70% concentration in the coastal countries covering only a surface of area of 20% of the union. Moreover, the interstate road network is only 80% paved. WAEMU countries have a total road network of 146,352 km with only 14% paved (see table 13), this situation denotes the insufficiency of the road transport infrastructure. However, a paved road does not necessarily identify the condition of the road.

Table 13: Road distribution throughout the WAEMU

Country	Roads	%Paved	Density/Km
Benin	13842	6.45	10.80
Burkina-Faso	13117	14.00	6.70
Cote d'Ivoire	68351	8.00	17.00
Mali	14776	17.00	2.00
Niger	13800	25.00	2.70
Senegal	14358	29.00	21.10
Togo	8108	20.00	28.40
WAEMU	146352	14.00	5.90

Source: (Coulibaly & Fontagne, 2005)

It is a fact that trucks are abusively stopped along West African transport corridors. WAEMU in its effort to tackle the problem has set up a program called "Improved Road Transport Governance" (IRTG). Different surveys have been realized by IRTG not only to quantify the unknown numbers of road blocks, barriers, and bribes causing delays along the countries' corridors, but also to detect the agents responsible (IRTG 2007).

2.15 Rail network

Although both Benin and the Nigerian transportation systems includes railways, they do not reach any of the landlocked country of the West African region, they are only limited to the national scope. However, Cote d'Ivoire and Senegal unlike Nigeria and Benin Republic have railways linking them to Burkina-Faso and Mali respectively. So it is only Niger republic out of the landlocked countries that does not have any rail link to any coastal country.

Both Dakar (Senegal) – Bamako (Mali) and Abidjan (Cote d'Ivoire) – Ouagadougou (Burkina-Faso) rail are colonial heritages from France. The first corridor dates back to the late 19th and early 20th century. Due to lack of maintenance and the wear and tear phenomenon, this corridor was often subject to breakdowns leading to its inefficiency in serving shippers. Abidjan-Ouagadougou was constructed between 1904 and 1954 and was also subject to the same challenges. However, the concession of these railways system to TRANSRAIL in October 2003 and to SITRAIL in March 1993 respectively has led to a change in the regulatory framework as well as the managerial systems (Derosier 2005; Mitchell & Budin 1998). This was expected to contribute to the improvement of the efficiency of the railway transportation.

Again, like the road insufficiency, there is a lack of sufficient railway infrastructure in the region. This situation is not just random it is the consequence of the low volume of cargo to be shipped by landlocked countries. There is a clear deficit balance of trade (imports exceeds exports), therefore the lack of sufficient amounts of cargo does not allow the benefit of economies of scale from railway transportation. So, the transportation cost increases and the more it does, the more it reduces the amounts of cargo to be shipped. Clearly, a vicious circle is established and becomes infernal (UNCTAD Trade and Development Board 2007).

2.16 Conclusion

In this chapter, the study has introduced the research literature which shows the factors influencing port competition, determinants of shippers' port choice and carriers' port selection decision, the regional: legal and institutional framework; maritime economic review; ports infrastructure and equipment; port accessibility; shipping line concentration and responses to changes; distance from port to landlocked countries commercial centre; and other influential factors on landlocked countries port service demand which includes road quality, road transport network and rail network.

The next chapter is the section where the study explains where and how primary data is collected and the research design, approach, strategy, philosophy, and population. The study will also present the research instruments used and the data analysis technique going to be carried out for the data collection.

Chapter Three: Methodology

3.0 Introduction

Research methodology is a plan or framework for collecting, organising and integrating data in order for an end result to be reached (Remenyi et al 1998) also according to (Hussy and Hussy 1997) methodology is defined as the analysis of the rational for the particular method used in a given study in general. What is important for research is to inform any reader of its findings (Neumann 2003).

The aim of any research is to add knowledge through discovery. (Sharp et al 2003) described research as "seeking through methodical process to add to one's own body of knowledge and hopefully, to that of others, by the discovery of non trivial findings".

Research methods all have a common underlying requirement, which is to ensure the objectivity and validity of the research findings. In order to find answers and solutions to the objectives of the research topic, a careful planning is required, which involved designing specific methods for each and every objective. So it is of utmost importance to describe and elaborate the methods that will be employed for achieving the solution for the research topic.

However, absolute objectivity is almost impossible in that personal knowledge and experience have an influence. This is particularly relevant to this project where the research is being conducted within the environment in which the research is engage.

3.1 Research Design:

The research design of this study is a descriptive design. This will involving collection, analysis and interpretation of data aimed at determining the feasibility of making the port of Cotonou route more attractive to customers wishing to import or export goods to or from the landlocked country of Niger, by a basically detailed description of the phenomenon.

It was decided that a semi-structured interview should be used in order to address some of the main themes resulting from literature but allowing the freedom to explore the responses of the interview to uncover meanings and probe opinions.

According to (Saunders et al 2009) the descriptive design is a research for which the purpose is to produce an accurate representation of persons, events and situation. Furthermore, (Gosh and Chopra 2003) descriptive design is more useful than diagnostic design because there are certain areas where knowledge has not yet been properly developed, while diagnostic design is concerned with the case as well as the treatment, the main objective of descriptive design is to acquire the knowledge.

3.2 Research Philosophy:

Before going into details of the research approach, it is important to underline the philosophy forming the foundation of this work, which is essential since the philosophy clarifies the assumption underpinning the given research. Saunders et al (2009) developed a research process for development of knowledge called the "research process onion".

Saunders et al went further to state that there is no better or worse research philosophy it all depends on the aims and nature of research. Realism is believed to be the most appropriate one for this given research, because it sees research as a descriptive procedure for examining conscious behaviour (Remenyi 1998 & Saunders et al 2003). It goes further to disclose the meaning of human behaviour in the business world by examining and clarifying the origins and details of those humans conscious experience.

The study adopts the realism philosophy in meeting the research's objectives. The study must investigate the feasibility of making Cotonou port more attractive to shippers importing and exporting goods from and to Niger. On the other hand, since shippers really cannot be studied in the same way as natural science, not everything can be explained by external factors alone, so the research will consider numerous issues and make a field investigation of shippers to answer the research questions.

3.3 Research Approach:

Academic research is basically developed through inductive, deductive and abductive methods. The inductive approach is developed from the data gathered and is based on evidence, and the main feature of this approach is that there is no

predetermined theory which the researcher will adopt, so it evolves from the research undertaken (Saunders et al 2009).

On the other hand deductive approach tests the current theory in order to add to the current theory, so as to add to the current knowledge availability and substantiate the theory further (Hussy and Hussy 1997). It is also an approach which agrees or disagrees with the research hypotheses (Saunders et al 2003). Generally it attempts to add knowledge to the theory and support the addition with its findings.

The abductive approach presents a mixture of the inductive and deductive methods; it is usually used when a researcher wishes to gain a deeper understanding of the current theory and literature. However, base on that, the research adopted the abductive approach which seems to be more applicable to the type of research undertaken, that is to say the researcher based the research theories on evidence of the data gathered and as well test current theories in order to contribute available knowledge and to state, after having collected an adequate number of data, what is the current situation of the making Cotonou port/route more attractive to customers wishing to import/export goods to/from that port/route.

3.4 Research Strategy:

Having determined the research approach, it is equally important to choose the research strategy as Saunders et al (2009) pointed out that the research strategy can help researchers to be clear about how to answer the research questions. Normally it contains clear objectives, specifies the source researchers intend to collect, and include the consideration of the constraints that researchers will inevitably have (Saunders et al 2009).

Saunders et al (2003) divided the research strategies into eight categories; experiment, survey, case study, grounded theory, ethnography, action research, cross-sectional and longitudinal studies and exploratory, descriptive and explanatory studies. However, in this study multi-methods are adopted to gain a rich understanding of the research objectives since multi-methods suit a study with different purposes (Saunders et al 2003).

3.4.1 Case Study:

Ghosh and Chopra (2003) sees case study as an important tool of social investigation, because it is a method involving the study of a sizeable number of cases or an intensive investigation of a particular unit, it further examines complex situations and combination of factors involved in a given situation so as to identify the casual factors operating.

Case study is an empirical inquiry that investigates a contemporary phenomenon within its reality context, but using multiple sources of evidence (Saunders et al 2009), therefore, utilising case studies in this research might enable the author to explain the reality of the business situation and further develop a grounded understanding of how ingredients of shipping process are interacted (Robson 2002 & Yin 2003, cited in Saunders 2009), the strategy is essentially descriptive and inferential in character (Gillham 2000a).

As indicated earlier, the central aim of this report is to ascertain the feasibility of making the Cotonou route/port more attractive to shippers of landlocked countries of West Africa. A case study of Niger republic was employed to answer the overall question, as this strategy has proven capable of answering 'why' and 'how' question (Gillham 2000a).

It should also be noted that quantitative research is limited to observing only quantifiable factors such as the frequency of shipping practice, but is not the type of research which lends itself to in depth analysis of the reason why that practice is compatible with shippers' decision. A detailed qualitative analysis on the other hand provides the opportunity to explore processes and linkages in import/export to/from Cotonou port and the transit corridors', it is generally an ideal means of exploring the research subject.

In order to maximise the credibility, validity and reliability of this research data, a case study of multiple Niger shippers is conducted (small and medium sized shipping companies) is conducted, but a single case study of port Cotonou is studied. The choice of multiple case studies of shipping firms is conducted based on their availability and frequency (as some shippers where interviewed at the port while some at Niamey).

3.4.2 Survey

In addition to the method of case study, a survey is also applied as another research strategy to find out shippers' points of view in general, as sharp et al (2003) indicates that survey is the most usual form of primary research undertaken and attributes its popularity to its advantages of comprehension, customisation, versatility, flexibility and efficiency. Therefore, it is likely to help find out the gap of understanding value between shippers' and Cotonou ports since the design of survey can be flexible and customized depending on the needs/aims of this research.

Ghosh and Chopra (2003) sees survey as an investigation of one or more variables of a population or economic, social or political institutions, it may refer to complete coverage of the population as in a census, but it is often used to refer to a study dealing only with a sample from the population. Furthermore, Saunders et al (2009) stated that it involves the structured collection of data from a sizeable population, and it is not only collection of data using questionnaires, it also includes other techniques like structured observations and interviews.

3.5 Data Collection Methodology:

According to Saunders et al (2003) collection of data is another important part of every research. This section lists the tools the researcher used for the research strategy. There are two methods of data collection as Saunders (2000) points out; the primary data and secondary data, however in this project both primary and secondary data were collected.

According to Collins and Hussey (2003) primary data is the data collected from the source that is often referred to as original. While Saunders et al (2007) sees secondary data as data that has already been collected for some other purposes.

3.5.1 Primary Data:

This refers to data originally collected by the study from the source of their origin in the process of investigation, it is a first-hand information, which is more accurate and detailed, but more costly and require more time and efforts than secondary data (Ghosh & Chopra 2003). Primary data is collected specifically for the research

project being undertaken (Saunders et al 2009). The major sources of primary data used for this research are structured interview and personal observation.

Structured interview is a data collection technique in which an interviewer physically meets the respondent, reads to the interviewee the same set of questions (already agreed with the project supervisor) in a predetermined order, and records his or her response to each question (Saunders et al 2009). Structured interview is obtaining information and understanding of issues relevant to the general aims, objectives and specific questions of the research project (Gillham 2000b).

The interview in this research was done to collect information about certain problems to find out the truth about shippers decision in port selection, the services offered and ways of improving the efficiency of Port Cotonou route. The research question in chapter 1.3 are a complete set of well defined questions, and the interviewer acted according to the instruction given in the schedule, and highly standardised technique of recording was used.

Palmerino (1999) argues that interviews are much better than other data collection methods because of a number of significant reasons, these beneficial features of interviews are as follows:

- More quality of information: give thoughtful replies and often answer "why" questions hidden behind
- More quantity of information: an interviewee often reveals some aspect that an interviewer might not consider, and in questionnaires it is almost impossible
- More depth: interviews are the only source of primary data that provides a lot of in depth, detailed information in social research
- More representation: if appropriately chosen the interviewees may reflect a more important opinion on a particular issue than several people participating in questionnaires.

Generally, interviews can be first priority when an explanatory research is required and it is used primarily in descriptive and qualitative studies. And as mentioned earlier, it is the case for the research carried out in this study. Shippers' were

randomly interviewed both at the Port of Cotonou and at Niamey. Additionally, some few Cotonou port officials were also interviewed.

Observation means seeing things with a purpose of collecting the facts that are relevant to the research undertaken and it is also an important method of acquiring information and knowledge as it plays more important role than experiment (Ghosh and Chopra 2003). It is also the systematic observation, recording, description, analysis and interpretation of people's behaviour and activities (Saunders et al 2009).

My personal observation included visiting Niamey, Cotonou port and Apapa (Lagos) port. And the observation consisted of both the primary observation which actions were noted as they happen and secondary observation, which are statements by observers of what happened.

And the data gathered through observation can be classed as descriptive observation and narrative account, the major advantage of this method of data collection is that it heightens the researchers awareness of significant social process, it is good at explaining what is going on in the particular social situations, and it affords the opportunity for the researcher to the experience 'for real' the emotions of those who being researched (Saunders et al 2009).

3.5.1 Secondary data:

The secondary sources are information that has been obtained and the researcher can use in order to gather more data needed for the study and to comprise both quantitative and qualitative data (Saunders et al 2000). Ghosh and Chopra (2003) added that it is the data that is already in existence and collected by others not the researcher and are available in published and unpublished forms, which makes them second hand data.

Secondary data in all its variety play several important roles in the course of a research. It does not only offer advantages in terms of cost and effort, as most traditional research method books describe it, but also that in certain cases their use may overcome some of the difficulties that particular trouble business ethics researchers in the gathering of primary data.

Besides secondary data helped the researcher to generate and refine research ideas and objectives to highlight the research possibilities, to discover approaches and strategies to similar researches, and also to sample the existing opinions on various theoretical issues. It also provided useful sources from which to answer or partially answer research questions, and it could also be used to complement primary data or use direct data is impossible.

The secondary data used in this research fell into the category of written documentary secondary data. This included materials such as books, journals, articles, reports, government or semi government publications, earlier research, conferences, seminar papers, business records, personal records, newsletters, newspapers and websites among other things from the internet.

In summary, the secondary data collected were extremely helpful and extensively used source of information. However, the author is aware of potential drawbacks they may contain. Firstly, data collected sometimes do not match the purpose of the research, so it was necessary to be particularly careful when using information provided. And finally, it was very important to check the quality of information provided in sources of the secondary data. Therefore, the author was very careful in choosing the source and checked several times the information and ideas discussed.

3.6 Research Population:

Research population is the set of cases (ports and routes) or group members that the study is researching (Saunders et al 2009). The population of this study is the total number of ports in the West African region that are competing with Cotonou port. But the port that fall within the definition of competition with Cotonou port is Apapa (Lagos) port.

Because it was not possible to investigate all the ports that made up the research population of this study, the sample was drawn because of the information that Apapa port was taking away business from Cotonou port.

As a consequence however the generalisation of the findings across the entire population of all the ports in the region is limited, since the result and analysis are based only on these two ports.

3.7 Data Analysis Technique:

The data from the interview will be initially analysed using the method of descriptive analysis. Descriptive method of analysis is the ability to break down data and to clarify the nature of the component parts and relationship between them (Saunders et al 2009), it is simple and easily applicable to various problems particularly in developing countries as a fact finding technique related mainly to the present and abstracting generalisation through the cross sectional study of present situation, it is concerned with the interpretation of data and more commonly used in social science, the descriptive method of analysis can be applied if the problem to be analysed fulfils certain criteria (Ghosh and Chopra 2003):

- The problem must be capable of being described not merely argued about
- The data should be accurate, objective and if possible quantifiable
- It is necessary for it to make comparisons between one situation and other among different aspect of the same situation

They further noted that, accuracy here does not mean the discovery of every relation or aspect of the problem, but simply the finding out as much detail as possible under given situations and presenting the details in an unbiased manner.

3.8 Limitation and Validity of Data Collection

There were a number of issues that emerged while implementing data collection from interviews. Firstly, the rivalry between Benin Republic and Nigeria affected the reliability of in depth interviews, even though there was a sound relationship between the author and the interviewees. Additionally, data collection was limited as 2 top port officials withdrew from the interview process to attend to some other commitments, thereafter time, distance and cost did not allow for rearrangement of the interview process, so it was only 2 middle management staff that were interviewed (they were class mates of some of my colleagues at WMU, Malmo), and it was impossible to check if the responded respondents correctly for all questions.

But on the other hand there was no problem encountered with the shippers. And to make an assessment of the credibility of the data collection, an assessment of the reliability and validity of the information was undertaken. As the interviews were

being held in confidence, so they should be reliable as the interviewees were able to state their opinions without fear of being traced to them.

In terms of secondary sources the main problem that was faced in course of the research is, a serious lack of enough in depth literature on the West African maritime industry, even the countries themselves either do not keep proper records, or they do not share it, and a lot of the available literature is in French.

3.10 Conclusion

Having shown the importance of research design, approach, philosophy and strategy, the study also defined the sources of data, research population, sample of the study, research instruments and data analysis technique.

The given work is developed on the research philosophy of realism that considers both objective, external factors and subjective, societal ones. For this research mixture of deductive and inductive approach was used to achieve as impartial conclusions as possible.

All these conclusions were drawn based on the analysis of both secondary and primary data. The first group comprised of books, articles, journal, reports, websites, mass media publications etc, while the field research was collected through structured interview and personal descriptive observation.

So next chapter is going to be about presentation of the data collected, and will be dealing with the data analysis techniques mentioned in this chapter. It is also the chapter where research questions are going to be answered and the hypotheses postulated tested.

Chapter Four: Data presentation and Discussion

4.0 Introduction:

Analysis is based on the research objectives and questions that bear directly to the hypotheses postulated. It should be stated that two Cotonou port officials, three Niger shippers at Cotonou port and nine shippers at Niamey were interviewed.

4.1 Data presentations and discussion associated with Objective 1:

Objective 1 is to evaluate the factors that influence shippers in their choice of route. Nine (9) shippers interviewed in Niamey, the shippers interviewed at Cotonou port are not included here because they have already made their choice of port. Below is the data:

Table 14: Data presentation associated with Objective 1

	Port of preference	Reason for preference	Mode of transport	Disadvantage of the route	Advantage of route
1	Apapa	Type of Cargo	Rail/road	Bureaucracy/ Expensive	Specialized cargo handling
2	Lome	Less congestion	Road	Distance/road	Quick clearance
3	Lome	Less bureaucracy	Road	Distance/road	Less officials to deal with
4	Cotonou	Distance	Road	Too many check points	Less duties to pay/ short distance
5	Cotonou	Less duty	Road	Congestion	Cheaper than any other port in the region
6	Cotonou	Economical/ social reason	Road	Inadequate infrastructure	Same socio-economic structure with Niger
7	Cotonou	Distance	Road	Too many security check points	Less duties to pay/ short distance
8	Cotonou	Socio-economic	Road	Bad road	Cheaper than any other port/ distance
9	Cotonou	Distance/cost	Road	Poor road	Same socio-economic structure with Niger

4.2 Discussion associated with Objective 1

In order to evaluate the factors that influence Niger shippers in their choice of route, 9 different shippers were interview at Niamey. And out of these 9 respondents 6 preferred the port of Cotonou. And out of the 6, 3 preferred Cotonou because of the short distance between Niamey and Cotonou, and the other 3 because of the lesser cost compared to all the other ports in the region. And all of them use road mode of transport from Cotonou port all the way to Niamey. All of them saw the disadvantage of the route as the state of the poor road linking the two countries. Also 4 out of the six said the advantage of the route is that it is the most economical, when you take into consideration the cost of transport from the ship to the warehouse.

The two respondents that choose Lome port stated they preferred it because it has less bureaucracy and is less congested than all the other ports in the region that are near to Niamey. They all use road from Lome to Niamey, and they see the distance and the bad road as the disadvantage of the route. But they stated that it has the advantage of quick clearance and less port officials to deal with than any other port within their proximity.

Only one interviewer actually preferred Apapa port of Nigeria, and he preferred this route because the port of Lagos is specialised in handling wet cargo. And he uses both rail and road transport, but the disadvantage of this port / route to him is that it is too expensive and the bureaucracy of the port and the whole route is too much. But acknowledge the advantage the port has of having the best specialised oil handling equipment in the region.

So to evaluate the factors that influence shippers in their choice of port / route, we can see from this data that price and distance are the major criteria's for consideration. Other factors include socio-economic structure of the port country, because two shippers choose Cotonou because it shares the same language, currency, and they share the same public (Government) structure, and quick clearance and less congestion. But to my surprise nobody among the people interviewed, mentioned the Free Economic Zone that the Benin government has been advertising or the trade agreement between Niger Republic and Benin Republic.

Table 15: Data presentation associated with Objective 2 (Port Officials)

	1st Official	2nd Official
Strengths of Port with respect to Niger	cost of doing business is cheaper than any other port in the region	There is a trade agreement between the two governments and they have a free trade zone in Cotonou city.
Is Cotonou losing Niamey business to Lagos (if true, why)	The statement diversional, Niamey business is not lost to Lagos. It is only a few Nigerian shippers that are now shipping through Lagos Instead of here.	It is not true, totally false. Even Nigerian shippers are using Cotonou port, not to talk of Niger shippers.
Measures considered to address the threat of competition posed by Lagos & Lome Ports	Further reduce port tariffs and encourage more trade facilitation agreements.	Reduce the port charges more and building of the proposed second terminal
Any issues affecting port efficiency	The movement of goods from the ship to the warehouse will be better if there is a rail track.	The port unions opposing opening of another terminal
Rate of the above mention issue in terms of relative importance	No it is not of any relative importance	To some extent it is, as they have gone on strike on more than one occasion, resulting in backlogs.

Table 16: Data presentation associated with Objective 2 (shippers)

	1	2	3
Advantage of the port compared to others in the region	Distance of the port to Niger	Only one boarder to cross	Cost of doing business is cheaper and the distance is shorter
Shortcomings of the port compared to others in the region	Limited size of the port	Road transport congestion	It is not connected to rail like Nigeria and Ghana
Score of the ports compared to others in the region	Very good	More than average	It is still the most favoured port in the region
Best service offered by the port	Cost of doing business	Quick custom clearance	The port charges and tariffs
Weak service offered by the port	It does not have facility to handle wet cargo	Inadequate infrastructure	Obsolete facilities and traffic issues

4.3 Discussion associated with Objective 2

In order to analyse the quality of service offered by port of Cotonou to potential shippers two port official and 3 shippers were interviewed at the port. The first official interviewed considered the cost of doing business is cheaper than any other port in the region, as the strength of Cotonou in respect of doing business with Niger, and this tallied with the response of the shippers. While the second official, stated that trade agreement between the two governments and the free trade zone in Cotonou city as the strength, but this did not tally with the responses of the shippers, as out of the total 12 shippers interviewed none mentioned the trade agreement or the free trade zone.

Both officials interviewed, denied that Cotonou is losing Niamey business to Lagos, and out of all the 12 shippers interviewed only one was using the Lagos port, even that looks like, it is happening because Cotonou port is not specialised in wet cargo and that was what the shipper was dealing with. And when asked what measures were being considered to address the threat of competition posed by Lagos and Lome ports, both officials were talking about reducing port charges and tariffs, even though the first one added more trade agreements and the second one added building another terminal. But my observation is that backward pricing is affecting the ports as there is no room for funding for re-investment back into the port, because of the low pricing.

When asked about issues affecting port efficiency, the first official mentioned lack of rail connection in the ports, but down played the relative importance of this. But the second one mentioned ports union problems and rated its effects very important, as it caused gone on strike on more than one occasion, resulting in huge backlogs while shutting down various sectors of the economy.

And when the shippers were asked about the advantages of the port compared to others in the region the first and the third both mentioned distance, with the third shipper adding the low pricing, while the second one said it was because of the single border to cross, which is also related to distance.

And when asked about the short coming of the port compared to others in the region, the first responded said it is the limited size of the port, the second one said road transport congestion, while the third one stated that it is not connected to rail like Nigeria and Ghana. And when asked to score the ports, none of them gave a position or percentage, but all agreed that it is the most favoured one in the region.

When they were asked what they consider the best service offered by the port the first and third all stated pricing, while the second said it is the quick customs clearance. And when asked the weak service offered, the first stated lack of facility to handle wet cargo, the second and third both complained about the poor state of the infrastructure, with the third adding port traffic.

So in analysing the quality of the service offered to shippers by the port Cotonou, it seems like the price and distance are the key factors that are attracting shippers to

the port, even though it has less clearance time than Nigeria, Lome seems to have more less clearance time than Cotonou. And is seems like Nigeria has better equipment and infrastructure than Cotonou, but the bureaucracy and the expensive price is driving the shippers away from the ports. It is only shippers of wet cargo that does not have a choice but Nigeria.

Table 17: Data presentation associated with Objective 3 (port officials)

	1	2
Measures considered to address port efficiency	Investment in ports infrastructure to handle freight handling capacity to more than a million tonnes of cargo annually	Hopes to construct a new port (terminal) to further expand capacity
Will the measures require additional funding	Yes	Yes
How will the funds be raised	Through financial and technical aid from foreign donors.	Through concession, public private partnership (PPP), build own and transfer (BOT)

Table 18: Data presentation associated with Objective 3 (shippers)

	1	2	3
Preferred mode of transport	Rail	Rail	Rail
Suggestion for improvement of services	Completion of rail link from Parakou to Niamey	There should be a link of the railway to the port, so that people can load their goods from the port.	The government of Benin should invest more in all infrastructure: rail, road, cranes, gantry, etc.

4.4 Discussion associated with Objective 3

Objective three is to assess ways, in which the Port Cotonou route can improve efficiency, and from interviewing the 2 port officials and all the shippers interviewed; this research was able to find out that; both officials accepted that there are issues currently affecting port efficiency. And for the measures to address the issues the first official said there was plan to investment in ports infrastructure to handle freight handling capacity to more than a million tonnes of cargo annually. The second added, the government of Benin hopes to construct a new terminal to the east of the current port, to expand capacity further and this new terminal is a critically important initiative. And both of them accepted that it will require huge new capital outlays. But will the first official was campaigning for international financial and technical aid, the second was stating that the government was considering raising the funds through port concession, Public Private Partnership (PPP) or Build Own and Transfer (BOT).

All the three shippers interviewed preferred the rail mode of transport to road transport, and they all suggested development of rail transport network, the first one suggested completing the rail from Parakou to Niamey, the second one suggested linking the rail from Benin city to the port, while the third one suggested the total overhauling of all infrastructure, the roads, rail and other ports equipment and infrastructure.

So in assessing ways of improving the efficiency of Port Cotonou route, this research found out that, the government is planning to invest $2 billion dollars in ports infrastructure between 2009 and 2010, these is to enable the port increase their port freight handling capacity to more than a million tonnes of cargo annually. And there is unconfirmed information that the United States of America has already contributed an undisclosed amount. But it is common knowledge that foreign aid will likely only be forthcoming from the international development banks if Benin continues to implement economic reforms (tailored by the World Bank).

In the opinion of this research, supported by some of the shippers interviewed the first step and the best way of improving efficiency is by linking the rail that reaches Parakou to the ports, replacing obsolete equipments, repair damaged or weak infrastructure, and reduce the number of officials involved in clearing.

4.5 Conclusion

The short border with Benin, with its main trading point in Gaya (Niger)—Malanville (Benin) over the Niger River. This is the main transit area for imports and exports. The Cotonou Corridor, both road and rail, is Niger's historic corridor; it is used to import a significant part of general merchandise. The Beninese route is the shortest option for the western part of the country. Its advantage is that it only has one border crossing and is entirely located in the CFA franc zone with 438 km by rail (Cotonou-Parakou,) as against a possible 1,150 km by rail (Lagos-Kano, Nigeria)

The port of Cotonou serves as a gateway for the sub-region with many goods — including almost 350,000 used cars per year -- arriving destined for Nigeria, Burkina Faso, Niger and other countries in West Africa. Formerly among the best ports in the region in terms of the speed at which cargo is unloaded and clears customs, it has faced increasing delays, blamed in large part on corruption. Average processing time to clear a shipment from the port is two weeks. Cotonou Port has therefore lost market to more efficient regional facilities such as the port in neighbouring Lome, Togo. Port authorities, under the leadership of a new director, have recently made efforts to improve the level of service through opening of a "guichet" unique, a one-stop processing facility to clear goods through the port. This provides "one-stop shopping" for traders and transporters to clear their goods through the port. Port authorities have also made efforts to combat corruption and other crimes through computerization of clearance procedures, establishment of a police force at the port, and taking advantage of training opportunities offered by U.S. customs officials, but the dimensions of the problems continue to dwarf these efforts. A large-scale port security upgrade is also underway. But these measures did not prevent the car dealers' sales from decreasing from 3 billion CFA to 1 billion.

The Benin Government has transferred the used car business from land adjacent to the port to an area east of Cotonou in an effort to relieve traffic congestion. The government of Benin hopes to construct a new port to the east at Seme to expand capacity further. This new port is a critically important initiative, but will require huge new capital outlays that will likely only be forthcoming from the international development banks if Benin continues to implement economic reforms. Unfortunately, the port unions oppose the opening of a second port, fearing what it

will mean for their jobs, and have gone on strike on more than one occasion, resulting in huge backlogs while shutting down various sectors of the economy.

Benin's infrastructure is uneven in quality. Good paved roads running east to west and north to south link Benin to its neighbours. Outside this basic grid, however, road conditions range from mediocre to poor.

Chapter 5: Conclusion and Recommendation

This chapter aims at summarising the study that have been carried out in this research and at suggesting some recommendations. The aim of this research is to investigate the feasibilities of making the port of Cotonou route more attractive to customers wishing to import/export goods to/from the Niger Republic. And the set out objectives to achieve this aim were; to evaluate the factors that influence shippers in their choice of route; to analyse the quality of the service offered by Cotonou port to potential shippers; and to assess ways of improving the efficiency of the port Cotonou route.

Chapter one was a general introduction of the research topic, stating out the aims and objectives of the study, giving the rationale of the study and the scope of the study. It is also where the research questions where provided.

Chapter two was where the literature on maritime transport in West Africa was presented. But before presenting the literature, literature on factors influencing port competition, determinants of shippers' port choice and determinants of carriers' port selection decision was introduced giving the general view of the stated headings. The chapter went further to give an overview of the maritime economics of the region, recognising the imbalances in value of imports and exports, imbalances goods loaded and unloaded, and imbalances in container traffic. The chapter also viewed the ports infrastructure, equipments, facilities and superstructure, and noticing the general state of bad state they are all in and the need to improve this for more efficiency in the region.

Chapter three was mainly presenting the method the research was carried out. It was in this chapter that the research philosophy identified realism because it sees research as a descriptive procedure for examining conscious behaviour; abductive approach because it is usually used when a researcher wishes to gain a deeper understanding of the current theory and literature. Strategy of research as case study because it is a method involving the study of a sizeable number of cases or an intensive investigation of a particular unit, it further examines complex situations and combination of factors involved in a given situation so as to identify the casual factors operating. Another strategy identified is survey; because it is the most usual form of primary research undertaken and attributes its popularity to its advantages of

comprehension, customisation, versatility, flexibility and efficiency. Data collection was described and the data analysis technique chosen was the descriptive method of analysis and it was choose because it is simple and easily applicable to various problems particularly in developing countries as a fact finding technique related mainly to the present and abstracting generalisation through the cross sectional study of present situation

And chapter four was where the primary data was presented and discussed. It is also where the research questions were answered in the discussions of the primary data discussed. And the research found out that, the Niger market is dominated by Cotonou port, followed by Lome port, and Lagos port is only used when there was a need for wet cargo. But it seems like Cotonou port does not have an immediate challenger in this market for now.

Recommendations key for improving efficiency of Cotonou ports for Niamey shippers include completing the rail link from Parakou to Niamey and linking that rail to the ports; improving service through the reduction of port official, which will reduce time wasted and illegal fees; renewing and improving ports infrastructure, superstructure, facilities and equipments. And in the opinion of this study, there is need to increase the charges and tariffs of the port so as to create financial room for maintenance and improvement of ports infrastructure, equipments and facilities.

Although the RTQI for Benin is not as good as the one for Togo and Nigeria, shippers from Niger prefer the port of Cotonou. The distance factor has overridden the road quality factor. It should be tempting to come up with the conclusion that a shipper will have a preference for a port that has a better corridor quality and which is also closer to the LLCs' capital city. This conclusion can be misleading since in 2001, before the Côte d'Ivoire crisis, Abidjan was leading the market for Mali. It could be contended that the road quality might have been better at that time compared to Senegal's. The reason for this contention is that road quality might have gradually deteriorated from 2001. Roads might have been damaged or they might also have known enormous roadblocks, which deter the flow of the cargo along the corridor causing delays and additional as well as other avoidable costs.

The improvement of the road access condition would definitely contribute to the minimization of the land-based costs whereas the improvement of port efficiency would lead to a minimization of port-based cost.

The port access condition would only be improved through the promotion and proper implementation of the trade facilitation measures encouraged by UNCTAD and other international organizations. It also goes along with the promotion of the transportation network. Meanwhile, the improvement of port efficiency will be gradually achieved through the promotion of port developments (adequate and sufficient infrastructures and handling equipments).

There is a need for West African ports to improve their infrastructure and their cargo handling performances. The recent port privatizations that have occurred in the region are expected to help to achieve such improvement.

Furthermore, it has been stated earlier that ports in the region have limitations in accommodating larger vessels, which would enable the benefit of economies of scale for both shipping lines and shippers. This fact represents a challenge for these ports in the future if account is taken of the year by year increasing traffic. Pálsson and his co-authors predicted that in five to ten years time 2500-4000 TEUs container vessels requiring up to 14m draught will be calling at West African ports (2007, p. 20). 94 Since there are multiple ports along the West African coast, improving port connectivity for shipping lines could be enhanced by the affirmation of one port as a trans shipment port in the region.

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Southampton SOLENT University

TO WHOM IT MAY CONCERN

MR ABDULRAHMAN BARKINDO is a student of this university and he is carrying out a research project with the following aim and objectives:

Aim:

- To investigate the feasibility of making the "Port Cotonou" route more attractive to customers wishing to import/export goods to/from the landlocked country of Niger.

Objectives:

- To evaluate the factors that influence shippers in their choice of route.
- To analyse the quality of the services offered by Port Cotonou to potential shippers.
- To assess ways of improving the efficiency of the Port Cotonou route.

Any assistance you can give Mr Barkindo with regard to facilitating this research would be greatly appreciated.

Tim Hallpike (Research Supervisor)

Faculty of Technology
Southampton Solent University
East Park Terrace
Southampton SO14 0RD
Fax: 023 8031 9739/334441

East Park Terrace
Southampton
SO14 0YN

Telephone 023 8031 9000
Fax 023 8022 2259
www.solent.ac.uk